

10/17/01 17:42 FAX 212 337 2371

USDOL OSHA

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U.S. Department of Labor

Occupational Safety and Health Administration
 201 Varick Street Room 870
 New York, New York 10014
 Tel: (212) 337-2378
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 OSHA Website Address: <http://www.osha.gov>



WTC Recovery Project
Joint Crane Inspection Initiative
Report & Analysis 10/17/2001

The joint crane inspection initiative was launched on Friday 10/12/01. The team consisted of three OSHA compliance officers with extensive crane inspection experience. The team was accompanied by similarly experienced personnel from Bechtel. At various points, the team was joined by representatives of the Operating Engineers and the employers affected. The team is still following up on cranes which were not available for inspection during the period. The team is also focus on rigging issues, slings, man baskets, and related topics of concern.

From 10/12-14, seventeen cranes were inspected at the site. Of these, ten were found to have serious safety deficiencies. The breakdown by sector follows (note: the sector identifies the prime contractor, but the crane may be owned, rented, or used by a subcontractor):

Sector	Cranes inspected	Cranes with deficiencies
Amec	5	3
Bovis	4	2
Tully	4	3
Turner	4	2
TOTAL	17	10

A total of 38 serious hazards were identified on the ten cranes with deficiencies. Most of the hazards related to crane setup, rigging, and hoisting practices. The most serious concerns relate to the practice of personnel hoisting using manbaskets. Other concerns raised deal with the general lack of preventative maintenance and down-time for the crane. The constant pace of the job also raises safety concerns due to fatigue of operators and grounds-persons. Continuing attention also needs to be paid to the adequacy of the foundations for the cranes, not only when set up but also when traveling. Finally, there needs to be a system in place to communicate between shifts if equipment is taken out of service. It has been observed that defective slings are discarded on the ground but not marked, meaning they might get used by another crew. A similar situation could arise with the cranes themselves. Some consistent form of tagging or marking should be developed.

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OSHA SAMPLING RESULTS SUMMARY AS OF 10/16/01**Asbestos:**

A total of 478 air monitoring samples for asbestos have been taken. From 9/13 -9/22, 177 samples were taken in the financial district. They were taken on OSHA personnel as they walked within certain predetermined zones. Results revealed asbestos concentrations ranging from ND to .037 f/cc., well below OSHA's permissible exposure limit (PEL) of .1 f/cc.

After 9/22, sampling focused on the rubble pile (the keystone area of the map) where 32 of 210 samples exceeded OSHA's limit via PCM analysis. However, upon further analysis using discriminating counting methods and/or TEM analysis, the number of asbestos fibers found dropped dramatically to below detectable levels or well below .1 f/cc.

Sampling at Pier 25 where trucks carrying debris are being off loaded by crane to barge revealed no detectable asbestos.

Carbon Monoxide:

Thirty one personal samples for workers on the rubble pile showed results ranging from 1 ppm to 34 ppm well below the OSHA 50 ppm permissible exposure limit.

Noise:

OSHA has been conducting noise monitoring in the rubble pile (the keystone area of the map). Three personal samples have been conducted on employees performing (or working near) various operations such as jack hammering. Employee's exposure to noise ranged from 88 dBA to 89 dBA. OSHA's permissible noise exposure limit for construction is 90 dBA.

Silica:

As of October 16th, the overwhelming majority of the 159 silica samples show no detectable levels of airborne silica. The highest sample result was approximately twice the OSHA limit, whereas the next highest level was less than half of this limit. Both of these levels were found on personnel working in the rubble pile, an area where OSHA continues to encourage the use of respiratory protection.

Volatile Organic**Compounds:**

As of October 16th, OSHA has taken 120 samples for volatile organic compounds (VOCs) such as acetaldehyde, acrylonitrile, acetone, benzene, 2-butanone, chlorodiphenyl (PCB), dioxin, ethyl benzene, formaldehyde, hexone, isocyanates, perchloroethylene, styrene, toluene, trichloroethylene, vinyl chloride and xylene. Screening samples initially showed elevated levels of some organic chemicals resulting from the fires burning in the rubble pile. Subsequent personal samples at breathing zone level and area samples show worker exposure levels to be below OSHA limits. However, one personal sample result for benzene was found at the 8hr OSHA allowable limit concentration of 1ppm. This exposure was found on a backhoe operator moving debris on the pile.

Metals:

OSHA has taken 218 air samples to monitor worker exposures to dusts, fumes, oxides, and other compounds of metals such as antimony, beryllium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, zinc, cadmium, magnesium, arsenic, and mercury. Results from these samples are generally well below the applicable OSHA limits. However, torch cutting and burning structural steel at the pile have resulted in instances of over-exposure as follows: copper (6); iron oxide (6); lead (1); and cadmium (3). Accordingly, OSHA is recommending that workers engaged in these operations continue to wear appropriate respiratory protection.

Other Analysis:

OSHA has sampled for dioxin, isocyanates, polynucleated aromatics and oxides of nitrogen. Analysis is pending.

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02/19/2002 12:26 E.P.A. → 92256923
FROM-MEYER SUOZZI ENGLISH & KLEIN

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F-528

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210

JAN 21 2002

Mr. Lowell Peterson
Meyer, Suozzi, English and Klein, P.C.
Counselors at Law
1350 Broadway, Suite 501
New York, New York, 10018

Dear Mr. Peterson:

Thank you for your October 16 letter to the Occupational Safety and Health Administration (OSHA). This letter constitutes OSHA's position only on the requirements discussed and may not be applicable to any issue not delineated within your original correspondence. You presented steps that Local 78 of the Asbestos, Lead, and Hazardous Waste Laborers union thinks are imperative to protect the workers and residents in the area of the World Trade Center from the settled dust produced by the collapse of the twin towers. The steps the union recommends and our replies are provided below.

Step 1: All of the dust must be tested for asbestos using the Transmission Electron Microscopy method.

Reply: In that the materials containing asbestos were used in the construction of the Twin Towers, the settled dust from their collapse must be presumed to contain asbestos. Therefore, the use of Transmission Electron Microscopy (TEM) is not necessary in order to establish that the applicable provisions of the Construction Asbestos standard, 29 CFR 1926.1101 apply during the demolition or salvage of the affected structures.

Step 2: All dust which tests positive must be removed by licensed contractors using certified asbestos handlers.

Reply: As you may know, contractor licensing and asbestos handler certification are city and state programs. Your concern, however, is directed toward ensuring the appropriate handling of asbestos hazards. OSHA's requirements, per 29 CFR 1926.1101(o)(1), address the need for a "competent person" and state that this individual must be on the worksite. The competent person must have the qualifications and authorities for ensuring worker safety and health as required by Subpart C, General Safety and Health Provisions for Construction (29 CFR 1926.20 through 1926.32).

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FROM: METER SOURCE: ENGLISH & ALBIN

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The general definition of a "competent person" is presented at 29 CFR 1926.32(f). According to the standard, a "competent person" is, "one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them." Paragraph 1926.1101(b) further defines a "competent person" as, "in addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f)." The Construction Asbestos standard further incorporates the provisions of 29 CFR 1926.20(b)(2) which requires frequent and regular inspections of job sites, materials, and equipment to be made by the competent person. These requirements are geared toward ensuring maximum safety and health for employees on worksites where asbestos is present.

Step 3: HEPA filters must be evaluated.

Reply: The National Institute for Occupational Safety and Health (NIOSH) is the Federal agency assigned the responsibility for approving respirators and filters. All respirators and filters required by OSHA standards must be NIOSH certified. OSHA's Respiratory Protection Standard, 29 CFR 1910.134, governs the workplace use of respirators.

A NIOSH-certified HEPA filter is, "a filter that is at least 99.97% efficient in removing mono-disperse particles of 0.3 micrometers in diameter." Equivalent particulate filters certified by NIOSH are the N100, R100, and P100 filters.

The 0.3 micrometers (microns - μm) diameter particle used in the certification testing of the HEPA (and 100-series) respirator filters is approximately the most penetrating for particulate filters. Although it seems contrary to expectation, smaller particles do not penetrate as readily as 0.3 μm particles. That is to say, these filters eliminate other particle sizes at least as well as the certified efficiency value of 99.97%.

Step 4: The remaining debris must be taken out properly.

Reply: Asbestos-containing waste must be presumed to be intermixed with the remaining debris at the World Trade Center site because materials containing asbestos were used in the construction of the Twin Towers. Therefore, in accordance with 1926.1101(g)(1)(ii), wet methods must and are being used to control employee asbestos exposures while removing the remaining Twin Towers debris except where employers

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demonstrate that the use of wet methods is infeasible. The debris must be kept wet at all times until it has been loaded and transported away from the site.

Thank you for your interest in occupational safety and health. We hope you find this information helpful. OSHA requirements are set by statutes, standards, regulations. Our interpretation letters explain these requirements and how they apply to particular circumstances, but they cannot create additional employer obligations. This letter constitutes OSHA's interpretations of the requirements discussed. Also, from time to time we update our guidance in response to new information. To keep apprised of such developments, you can consult OSHA's website at <http://www.osha.gov>. If you have any further questions, please feel free to contact the Office of Health Compliance Assistance at 202-693-2190.

Sincerely,


John L. Henshaw

Manhattan Area Office Stats on LEP - WTC Clean Up

Universe of Buildings subject to Local Emphasis Program is East to Broadway; South to Rector; West to Hudson; North to Chambers

Confidential Info - Not for Public Release - (Ongoing OSHA Enforcement Activities)

As of 3/27/02:

Sampling was conducted at 4 of the 8 sites. Sample results are as follows:

Site 1:

4 bulks for asbestos were taken: **All were ND for asbestos**
2 bulks taken on 2nd fl ground & 2nd fl stairway debris
2 bulks taken from overhead TSI

3 personal for asbestos were taken: **All were ND for asbestos**
Total Fibers range from ND - .1800 f/cc
Activity: Electricians working in the basement

2 Total Dust: **Sample Results range from 0.0698 - 0.1997 mg/m3**
Activity: Electrician working in basement

2 Si Area sample: **Samples for silica were ND**
Activity: Debris removal - 2nd fl stairway

4 bulks for heavy metals: **Bulks taken in same area as asbestos**
Sample 1 detected: Beryllium .0011%
Iron Oxide .8917%
Manganese .2044%

Sample 2 detected: Iron Oxide .9668%
Manganese .0359%

Sample 3 detected: Cobalt 1.8097%
Lead .2232 %
Manganese .2177%
Cadium .0140 %
Iron 2.0754%
Zinc 0.5136%

Sample 4 detected: Cobalt .0047%
Manganese .0083%
Iron 0.5134

Site 2:

3 asbestos (air) were taken:

All were ND for asbestos

Total fibers range from 0.0230-0.0620 f/cc

Activity:

3rd phase of cleaning area - cleaning hotel rooms using
HEPA vac

Site 3:

6 bulks for asbestos were taken:

All were ND for asbestos

(4) 4th fl -NW side of building (WTC debris blown in)

(2) 6th fl - Area already cleaned -took samples as precaution

3 personal samples for asbestos:

All were ND for asbestos

Total fibers range from .0960 - .270 f/cc

Activity:

2 samples empee bagging office material in area
contaminated from WTC collapse

1 sample empee cleaning HVAC system

2 personal for Silica were taken:

Activity:

same as the asbestos

Site 4:

Samples for asbestos, silica and metal dust were taken. Sample results pending.



B2	Church-Vesey	A	0.023	none
B2	SWCorner 90 Church	A	0.015	none
A1	NECorner PS89	A	0.012	none
B2	Church-Vesey	A	0.015	none
B2	90 Church	A	0.017	none

SUMMARY

Zone	# Air Samples	# Bulk Samples	fibers/cc (f/cc)
Hot	9	0	0.004-0.027
Warm	5	0	0.003-0.017
Financial District	4	0	<0.003-0.027

9/19 WTC OSHA ASBESTOS SAMPLING DATA

Permissible exposure Limit (PEL) : 0.1 fiber/cubic centimeter as an 8-hr time weighted average
Excursion limit: 1 fiber/cubic centimeter over a 30- minute period.

<u>Area</u>	<u>Location</u>	<u>Sample Type</u>	<u>fibers/cc</u>	<u>TEM fibers/cc</u>
B2	Church-Park-G'wich-Murray-B'clay	<u>Personal</u>	0.0038	<0.005
B2	Church-Park-G'wich-PkSq-B'clay-Vesey	P	0.029	<0.006
A3	Albany-G'wich-Spedestrian Bridge	P	0.011	<0.003
B2-B3	Church-Vesey-WB'way-B'clay-Albany-G'wich	P	0.018	<0.004
A3-B3	WB'way-B'clay-Church-G'wich-Liberty-Albany-Cedar	P	0.014	<0.004
A2-B2	Murray-B'clay-PS89-West-Chambers-Liberty	P	0.009	<0.003
A3	Liberty-West-Albany-G'wich-Spedestrian Br'ge	P	0.011	<0.003
A3-B3	B'wy-B'clay-Church-G'wich-Lb'ty-Albany-Cedar	P	0.014	<0.004
A2	NE corner G'wich-Park	A	0.009	<0.005
A2	NE corner B'clay-West	A	0.018	<0.006
B3	SE corner Thames-Trinity	A	0.017	<0.004
A2	West-Vesey Toll Booth	A	0.007	<0.005
A3	West st. under South Gate	A	0.008	<0.004



A1	SW corner of West & Chambers Front of PS89	A	0.005	
A2	Corner Vesey & West (toll booth)	A	0.008	<0.004
B2	NW corner of Church & Vesey (subway entrance)	A	0.009	
A3	SW corner of Liberty & West St (by south bridge)	A	0.016	<0.004

9/20 SUMMARY

Zone	# Air Samples	# Bulk Samples	fibers/cc
Hot	4	2	0.005-0.027
Warm	1	1	0.005
Financial District	13	0	<0.005-0.037

Verizon

[A787708] Turner-WTC #7- N.side,west side of the pile, Pick operator moving debris from the Verizon Bldg	P	355	overload w. non-asbestos dust. Not analyzed	Over loaded
[105BL10][789228] Tishman- Verizon Bldg- West of Barclay Laborer- sweeps sidewalk	P	65	0.2700	ND
[1010CD02] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St)	P	220	0.0620	ND
[1010CD03] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St) Laborer	P	305	0.0380	ND
[1010CD04] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St)	P	220	0.0340	Still Pending
[1011CD03] Tishman/Sugrue Verizon Building-Vesey & West Laborer doing renovation work	P	240	0.1200	ND
[1011CD04] Tishman/Champion Verizon Building (Vesey & West) Employee sweep & clean bldg	P	405	0.280	ND
[1011CD06] Verizon Building	Bulk		NA	ND
[1011CD02] Verizon Bldg-8th fl Employee dusting in cubicle # 832	A	375	0.0220	ND
[1011CD07] Verizon Bldg (Vesey & West) 8 th fl -on job box for Pearlman Painters	W		None	ND

Amex

[1001LL1] AMEX bldg-NE side of 1 st fl	A	275	0.0150	ND
[1001LL2] AMEX bldg- 1 st fl-sign in shack	A	303	0.0380	0.0060
[10101TG1] Amex Bldg - 1 st fleast side (face West st) on stairway inside door	A	372	0.0180	ND
[10101TG2] Amex Bldg 2 nd Fl North side (facing Vesey St)-top of stairs	A	350	0.0090	ND
[1001LL3] Amex Bldg-2nd fl top of East staircase	A	305	0.0200	ND
[10101TG3] Amex Bldg-1st Fl North side (facing Vesey St)	A	369	0.0100	ND
[1001KH10] Amex Bldg-25th Fl nr elevator banks-center of bldg	A	260	0.0150	ND

Maldonado, Jane

From: Ippolito, David [david.ippolito@osha.gov]**Sent:** Wednesday, May 15, 2002 4:25 PM

To: 'Maltais.Nancy@epamail.epa.gov'; dianac@dep.nyc.gov; cxjohnso@gw.dec.state.ny.us; njeffery@health.nyc.gov; jleight@health.nyc.gov; rjt03@health.state.ny.us; nkk01@health.state.ny.us; reed.larry@epamail.epa.gov; grevatt.peter@epamail.epa.gov; tulis.dana@epamail.epa.gov; rcw1@cdc.gov; svr1@cdc.gov; marianne.jackson@fema.gov; habib.nina@epamail.epa.gov; basso.ray@epamail.epa.gov; pavlou.george@epamail.epa.gov; maddaloni.mark@epamail.epa.gov; callahan.kathy@epamail.epa.gov; laposta.dore@epamail.epa.gov; jprudhom@health.nyc.gov; michaelgi@dep.nyc.gov; kmckinne@health.nyc.gov; lilan@cityhall.nyc.gov; sbenson@oem.nyc.gov; rlc07@health.state.ny.us; sxj6@cdc.gov; axb9@cdc.gov; robert.tranter@fema.gov; fitzpatrick.robert@epamail.epa.gov; kruger.mary@epamail.epa.gov; Garvey, Robert; giardina.paul@epamail.epa.gov; girman.john@epamail.epa.gov; smith.terry@epamail.epa.gov; debonis.michael@epamail.epa.gov; jmiller@health.nyc.gov; gibb.herman@epamail.epa.gov; salkie.richard@epamail.epa.gov; rotola.joe@epamail.epa.gov; spryce@dcas.nyc.gov; simon.paul@epamail.epa.gov; lynes.carol@epamail.epa.gov; schaum.john@epamail.epa.gov; mitchell.judy-ann@epamail.epa.gov; yeh.alice@epamail.epa.gov

Cc: mmm03@health.state.ny.us; sapetron@gw.dec.state.ny.us; cruz.auria@epamail.epa.gov; debonis.michael@epamail.epa.gov; stradford.virginia@epamail.epa.gov; amo03@health.state.ny.us; rsierra1@health.nyc.gov; kushner.burton@epamail.epa.gov; Garvey, Robert; nellie@dep.nyc.gov; janem@dep.nyc.gov; ln1@cdc.gov; lxlucca@gw.dec.state.ny.us; amo03@health.state.ny.us; mprice@health.nyc.gov; higgins.john@epamail.epa.gov; sprague.bruce@epamail.epa.gov; valejand@health.nyc.gov

Subject: RE: SOW Attached

If these buildings were not affected, OSHA sees no reason to require PPE or to be concerned about any airborne contaminants.

Is boiler plate language being used?

These people are sampling in "CLEAN" apartments. All employers should be aware of, and in compliance with, OSHA regulations. However, in this cases, if safety and health plans are necessary, then this need must be linked to something other than background sampling in apartments unaffected by WTC.

-----Original Message-----

From: Maltais.Nancy@epamail.epa.gov

[mailto:Maltai.Nancy@epamail.epa.gov]

Sent: Wednesday, May 15, 2002 7:50 AM

To: dianac@dep.nyc.gov; cxjohnso@gw.dec.state.ny.us; njeffery@health.nyc.gov; jleight@health.nyc.gov; rjt03@health.state.ny.us; nkk01@health.state.ny.us; reed.larry@epamail.epa.gov; grevatt.peter@epamail.epa.gov; tulis.dana@epamail.epa.gov; rcw1@cdc.gov; svr1@cdc.gov; marianne.jackson@fema.gov; habib.nina@epamail.epa.gov; basso.ray@epamail.epa.gov; pavlou.george@epamail.epa.gov; maddaloni.mark@epamail.epa.gov; callahan.kathy@epamail.epa.gov; laposta.dore@epamail.epa.gov; jprudhom@health.nyc.gov; michaelgi@dep.nyc.gov; kmckinne@health.nyc.gov; lilan@cityhall.nyc.gov; sbenson@oem.nyc.gov; rlc07@health.state.ny.us; sxj6@cdc.gov;

5/15/2002

RE: SOW Attached

axb9@cdc.gov; robert.tranter@fema.gov;
 fitzpatrick.robert@epamail.epa.gov; kruger.mary@epamail.epa.gov;
 Ippolito, David; Garvey, Robert; giardina.paul@epamail.epa.gov;
 girman.john@epamail.epa.gov; smith.terry@epamail.epa.gov;
 debonis.michael@epamail.epa.gov; jmiller@health.nyc.gov;
 gibb.herman@epamail.epa.gov; salkie.richard@epamail.epa.gov;
 rotola.joe@epamail.epa.gov; spryce@dcas.nyc.gov;
 simon.paul@epamail.epa.gov; lynes.carol@epamail.epa.gov;
 schaum.john@epamail.epa.gov; mitchell.judy-ann@epamail.epa.gov;
 yeh.alice@epamail.epa.gov
 Cc: mmm03@health.state.ny.us; sapetron@gw.dec.state.ny.us;
 cruz.auria@epamail.epa.gov; debonis.michael@epamail.epa.gov;
 stradford.virginia@epamail.epa.gov; amo03@health.state.ny.us;
 rsierra1@health.nyc.gov; kushner.burton@epamail.epa.gov; Garvey, Robert;
 nellie@dep.nyc.gov; janem@dep.nyc.gov; lnl1@cdc.gov;
 lxlucca@gw.dec.state.ny.us; amo03@health.state.ny.us;
 mprice@health.nyc.gov; higgins.john@epamail.epa.gov;
 sprague.bruce@epamail.epa.gov; valejand@health.nyc.gov
 Subject: SOW Attached

----- Forwarded by Nancy Maltais/R2/USEPA/US on 05/15/02 07:45 AM -----

Dana Tulis
 05/14/02 06:01 PM
 To: Nancy Maltais/R2/USEPA/US@EPA, Mark
 Maddaloni/R2/USEPA/US@EPA
 cc:
 Subject: SOW Attached

Please distribute to the Indoor Air Work Group and the COPC group. This is basically final after including comments from folks over the last month or so, we hope to get this to our contracts folks this week. Any comments are needed this week. We feel as though we've resolved all of the issues at this point. Thanks.

----- Forwarded by Dana Tulis/DC/USEPA/US on 05/14/02 05:59 PM -----

Carol Lynes
 05/14/02 05:27 PM
 To: Dore LaPosta/R2/USEPA/US@EPA, Kathy
 Callahan/R2/USEPA/US@EPA, Dana Tulis/DC/USEPA/US@EPA
 cc: Terry Smith/DC/USEPA/US@EPA
 Subject: SOW Attached

(See attached file: sowindoorR1.wpd)

5/15/2002

Manhattan Area Office Stats on LEP - WTC Clean Up

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contaminated from WTC collapse**

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SUMMARY

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Financial District	4	0	<0.003-0.027

9/19 WTC OSHA ASBESTOS SAMPLING DATA

Permissible exposure Limit (PEL) : 0.1 fiber/cubic centimeter as an 8-hr time weighted average

Excursion limit: 1 fiber/cubic centimeter over a 30- minute period.

<u>Area</u>	<u>Location</u>	<u>Sample Type</u>	<u>fibers/cc</u>	<u>TEM fibers/cc</u>
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B2	Church-Park-G'wich-PkSq-B'clay-Vesey	P	0.029	<0.006
A3	Albany-G'wich-Spedestrian Bridge	P	0.011	<0.003
B2-B3	Church-Vesey-WB'way-B'clay-Albany-G'wich	P	0.018	<0.004
A3-B3	WB'way-B'clay-Church-G'wich-Liberty-Albany-Cedar	P	0.014	<0.004
A2-B2	Murray-B'clay-PS89-West-Chambers-Liberty	P	0.009	<0.003
A3	Liberty-West-Albany-G'wich-Spedestrian Br'ge	P	0.011	<0.003
A3-B3	B'wy-B'clay-Church-G'wich-Lb'ty-Albany-Cedar	P	0.014	<0.004
A2	NE corner G'wich-Park	A	0.009	<0.005
A2	NE corner B'clay-West	A	0.018	<0.006
B3	SE corner Thames-Trinity	A	0.017	<0.004
A2	West-Vesey Toll Booth	A	0.007	<0.005
A3	West st. under South Gate	A	0.008	<0.004



A1	SW corner of West & Chambers Front of PS89	A	0.005	
A2	Corner Vesey & West (toll booth)	A	0.008	<0.004
B2	NW corner of Church & Vesey (subway entrance)	A	0.009	
A3	SW corner of Liberty & West St (by south bridge)	A	0.016	<0.004

9/20 SUMMARY

Zone	# Air Samples	# Bulk Samples	fibers/cc
Hot	4	2	0.005-0.027
Warm	1	1	0.005
Financial District	13	0	<0.005-0.037

Verizon

[A787708] Turner-WTC #7- N.side,west side of the pile, Pick operator moving debris from the Verizon Bldg	P	355	overload w. non-asbestos dust. Not analyzed	Over loaded
[105BL10][789228] Tishman- Verizon Bldg- West of Barclay Laborer- sweeps sidewalk	P	65	0.2700	ND
[1010CD02] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St)	P	220	0.0620	ND
[1010CD03] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St) Laborer	P	305	0.0380	ND
[1010CD04] Tishman/Champion Verizon Bldg adj to WTC#7 (Vesey & West St)	P	220	0.0340	Still Pending
[1011CD03] Tishman/Sugrue Verizon Building-Vesey & West Laborer doing renovation work	P	240	0.1200	ND
[1011CD04] Tishman/Champion Verizon Building (Vesey & West) Employee sweep & clean bldg	P	405	0.280	ND
[1011CD06] Verizon Building	Bulk		NA	ND
[1011CD02] Verizon Bldg-8th fl Employee dusting in cubicle # 832	A	375	0.0220	ND
[1011CD07] Verizon Bldg (Vesey & West) 8 th fl -on job box for Pearlman Painters	W		None	ND

Amex

[1001LL1] AMEX bldg-NE side of 1 st fl	A	275	0.0150	ND
[1001LL2] AMEX bldg- 1 st fl-sign in shack	A	303	0.0380	0.0060
[10101TG1] Amex Bldg - 1 st fleast side (face West st) on stairway inside door	A	372	0.0180	ND
[10101TG2] Amex Bldg 2 nd Fl North side (facing Vesey St)-top of stairs	A	350	0.0090	ND
[1001LL3] Amex Bldg-2nd fl top of East staircase	A	305	0.0200	ND
[10101TG3] Amex Bldg-1st Fl North side (facing Vesey St)	A	369	0.0100	ND
[1001KH10] Amex Bldg-25th Fl nr elevator banks-center of bldg	A	260	0.0150	ND

TRANSPORTATION AND
INFRASTRUCTURE COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

REPLY TO:

WASHINGTON OFFICE
2334 RAYBURN BUILDING
WASHINGTON, DC 20515
(202) 225-5535

DISTRICT OFFICE
201 VARON STREET
SUITE 849
NEW YORK, NY 10014
(212) 367-7332

DISTRICT OFFICE
632 NEPTUNE AVENUE
BROOKLYN, NY 11224
(718) 375-3198

E-mail: jerrold.nadler@mail.house.gov
Web: <http://www.house.gov/nadler>

OFFICE OF CONGRESSMAN JERROLD NADLER

Date: 5/24/02 Time: _____

To: B56 Alvertrone

Fax#: 718 595 4418 Telephone#: _____

From: 718 595 4544 Rep. Jerrold Nadler X Amy Rutkin X

Brett Heimov _____

David Lachmann _____

John Doty _____

Rachel Ostendorf _____

Janice Siegel _____

David Greengrass _____

Becca Raiser _____

Lisette Morton _____

Eric Schmeltzer _____

Intern _____

Number of Pages (including cover sheet): 4

Comments: Ltr from OSHA to Lowell Peterson

If there is a problem with this fax please contact our office. Thank you.

PHONE 202-225-5635 FAX 202-225-6935

05/24/02 12:08 FAX

002

02/19/2002 12:26 E.P.A. → 92256523
FROM: MEYER SUOZZI ENGLISH & KLEIN

+2122391311

T-28E P 02/24 NO. 627 2021
P-518

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210

JAN 27 2002

Mr. Lowell Peterson
Meyer, Suozzi, English and Klein, P.C.
Counselors at Law
1350 Broadway, Suite 501
New York, New York, 10018

Dear Mr. Peterson:

Thank you for your October 16 letter to the Occupational Safety and Health Administration (OSHA). This letter constitutes OSHA's position only on the requirements discussed and may not be applicable to any issue not delineated within your original correspondence. You presented steps that Local 78 of the Asbestos, Lead, and Hazardous Waste Laborers union thinks are imperative to protect the workers and residents in the area of the World Trade Center from the settled dust produced by the collapse of the twin towers. The steps the union recommends and our replies are provided below.

Step 1: All of the dust must be tested for asbestos using the Transmission Electron Microscopy method.

Reply: In that the materials containing asbestos were used in the construction of the Twin Towers, the settled dust from their collapse must be presumed to contain asbestos. Therefore, the use of Transmission Electron Microscopy (TEM) is not necessary in order to establish that the applicable provisions of the Construction Asbestos standard, 29 CFR 1926.1101 apply during the demolition or salvage of the affected structures.

Step 2: All dust which tests positive must be removed by licensed contractors using certified asbestos handlers.

Reply: As you may know, contractor licensing and asbestos handler certification are city and state programs. Your concern, however, is directed toward ensuring the appropriate handling of asbestos hazards. OSHA's requirements, per 29 CFR 1926.1101(o)(1), address the need for a "competent person" and state that this individual must be on the worksite. The competent person must have the qualifications and authorities for ensuring worker safety and health as required by Subpart C, General Safety and Health Provisions for Construction (29 CFR 1926.20 through 1926.32).

05/24/02 12:09 FAX

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02/19/2002

12:26

E.P.A. → 92256323

PNC-1006 11:04 AM

FROM: METER 300221 BRUNSON & ALLEN

*2142381311

1-250

P.03/04

NO. 227

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The general definition of a "competent person" is presented at 29 CFR 1926.32(f). According to the standard, a "competent person" is, *"one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them."* Paragraph 1926.1101(b) further defines a "competent person" as, *"in addition to the definition in 29 CFR 1926.32(f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32(f)."* The Construction Asbestos standard further incorporates the provisions of 29 CFR 1926.20(b)(2) which requires frequent and regular inspections of job sites, materials, and equipment to be made by the competent person. These requirements are geared toward ensuring maximum safety and health for employees on worksites where asbestos is present.

Step 3: HEPA filters must be evaluated

Reply: The National Institute for Occupational Safety and Health (NIOSH) is the Federal agency assigned the responsibility for approving respirators and filters. All respirators and filters required by OSHA standards must be NIOSH certified. OSHA's Respiratory Protection Standard, 29 CFR 1910.134, governs the workplace use of respirators.

A NIOSH-certified HEPA filter is, *"a filter that is at least 99.97% efficient in removing mono-disperse particles of 0.3 micrometers in diameter."* Equivalent particulate filters certified by NIOSH are the N100, R100, and P100 filters.

The 0.3 micrometers (microns - μm) diameter particle used in the certification testing of the HEPA (and 100-series) respirator filters is approximately the most penetrating for particulate filters. Although it seems contrary to expectation, smaller particles do not penetrate as readily as 0.3 μm particles. That is to say, these filters eliminate other particle sizes at least as well as the certified efficiency value of 99.97%.

Step 4: The remaining debris must be taken out properly.

Reply: Asbestos-containing waste must be presumed to be intermixed with the remaining debris at the World Trade Center site because materials containing asbestos were used in the construction of the Twin Towers. Therefore, in accordance with 1926.1101(g)(1)(ii), wet methods must and are being used to control employee asbestos exposures while removing the remaining Twin Towers debris except where employers

05/24/02 12:10 FAX

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02/19/2002 12:26 E.P.A. → 92256923

NO. 687

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Sincerely,



John L. Henshaw

05/24/02 12:08 FAX



TRANSPORTATION AND
INFRASTRUCTURE COMMITTEE

Congress of the United States
House of Representatives
Washington, DC 20515

05TH DISTRICT NEW YORK 001

REPLY TO

WASHINGTON OFFICE
2234 RAYBURN BUILDING
WASHINGTON, DC 20515
202-225-6655

DISTRICT OFFICE
301 VARON STREET
SUITE 800
NEW YORK, NY 10014
212-367-7152

DISTRICT OFFICE
470 WEST 46th STREET
BROOKLYN, NY 11220
718-375-7155

E-mail: jerold@house.gov
Web: <http://www.house.gov/nadler>

OFFICE OF CONGRESSMAN JERROLD NADLER

Date: 5/24/02 Time: _____

To: Bob Alverton

From: 718 595 4418 Telephone: 718 595 4544

Rep. Jerrold Nadler X Amy Purkin X

Brett Beimey _____ David Schumann _____

Josh Doty _____ Raine Ostendorf _____

Age! _____ David Greenberg _____

Michael Raiser _____ Lisette Morton _____

Schmeltzer _____ Intern _____

Number of Pages including cover sheet: 4

Comments: ltr from OSHA to Lowell Peterson

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002

02/19/2002

12:26

E.P.A. → 92256923

102-19-02 11:13 AM

FROM: MEYER SUOZZI ENGLISH & KLEIN

+2122491211

T-266

P 02/04

NO. 637

P-678

2002

U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210

JAN 31 2002

Mr. Lowell Peterson
Meyer, Suozzi, English and Klein, P.C.
Counselors at Law
1350 Broadway, Suite 501
New York, New York, 10018

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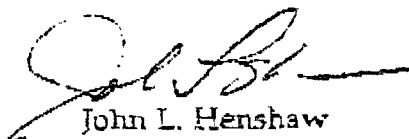
0204

3

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Sincerely,



John L. Henshaw

NY, KR, BR, IL FYI 3/13/02

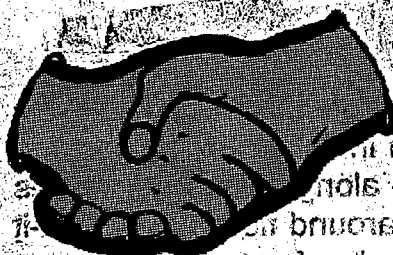
CONSTRUCTION
INDUSTRY PARTNERSHIP



WTC WORKERS SAFETY BULLETIN #11

Friday, March 8, 2002

World Trade Center Emergency Project



**Joint Labor-Management
Health & Safety Committee
Leadership Co-chairs**

Edward J. Malloy, BCTC

Louis J. Coletti, BTEA

Ken Holden, DDC

Leadership Members

Mike Forde, NYC DC UBC

Gary LaBarbera, IBT 282

Thomas C. Maguire, IUOE 15

Joseph Rizzuto, IUOE 14

Anthony Silveri, LIUNA 78-79

Edward Walsh, IW 40

James Abadie, Bovis

John Cavanagh, AMEC

Peter Davoren, Turner

Mary Ellen Sacchetti, Plaza

Peter Tully, Tully

Frank McArdle, GCA

Raymond McGuire, CAGNY

Site Committee Members

Jeff Grabelsky, BCTD, AFL-CIO, BCTC

Hank Kita, BTEA

Ray Master, Bovis

Bruce Rottner, DDC

Jim Conway, IUOE 14-14B

Howard Hawkins, IW 40

Dominick Marrocco, IBT 282

John McGrail, NYC DC UBC

Bruce Murphy, IUOE 15

John Zuccaro, LIUNA 731

Dave Collins, Turner

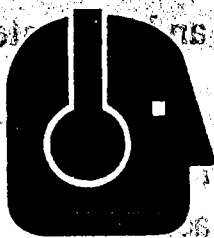
Gary DiPaolo, AMEC

Bill Ryan, Tully

Nancy Clark, CIP Coordinator

What did you say? I can't hear you

NOISE LEVELS INCREASE



Recent tests by OSHA and Liberty Mutual show high noise levels in the sub-grade areas of WTC 6. Exposure to noise can result in hearing loss, tinnitus (ringing in the ears) and stress effects, like increased heart rate and blood pressure. **Noise induced hearing loss is preventable but it's not treatable.** If you're working around noisy equipment wear hearing protectors - either plugs or muffs. In enclosed areas wear both. If you are concerned about noise levels in your area, contact your supervisor or steward, request noise monitoring and hearing protection.

PPE Compliance Update

KEEP ON IMPROVING

The concerted efforts of site partners have resulted in substantial increases in PPE use over the past week. OSHA reports show that eye protection use almost doubled and respirators use jumped by 25%. Use of hard hats and vests remains high. Keep up the good work!!



OSHA respirator reports show:

Good Going: Carpenters, core drilling, torch cutters, jack hammers, flaggers, foremen

Need Improvement: Operators, truck drivers, laborers

OSHA eye protection reports show:

Good Going: Torch cutters, core drillers, foremen, infrastructure workers, laborers, jack hammers

Need Improvement: Carpenters, flaggers, walking on ramp.

P. 2 Friday, March 8, 2002

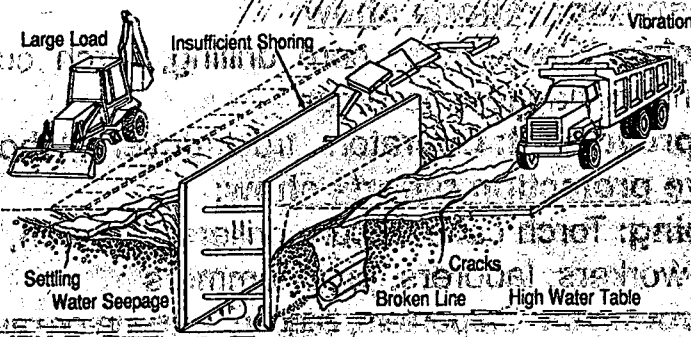
WTC Workers Safety Bulletin

Tool Box Talks: EXCAVATIONS



There has been a big increase in excavation work inside and outside the zone. Excavations for infrastructure repairs and installations create hazards so special precautions are needed to protect workers in and around trenches.

- Recent OSHA reports identified many excavation hazards:
 - ▶ no competent person overseeing work
 - ▶ no egress out of the trench
 - ▶ unprotected excavations
- Contractors need to plan all excavations and integrate protection into work activities
- **Beware** - between 50-100 workers die each year in the U.S. from cave-ins and other trenching accidents.
- Best practices to prevent cave-ins and other accidents:
 - ✓ Assign a competent person to: determine type of protection needed; inspect trench daily and after rain or snow; check and correct any hazards; shut down the operation until it is safe.
 - ✓ Trenches 5 feet deep or more need shoring, sloping, or other protection.
 - ✓ Spoils, tools and materials should be kept at least 2 feet away from edges or install retaining devices.
 - ✓ Install ladders if trench is more than 4 feet deep.
 - ✓ Make sure work does not interfere with utility lines.
 - ✓ Monitor trench for hydrogen sulfide and other hazardous materials before entering and while inside the trench if recommended by competent person or industrial hygienist. Hydrogen sulfide smells like rotten eggs and can cause severe respiratory distress.



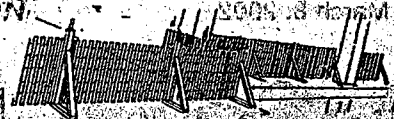
Site Safety Updates

Stewards' Meeting

Friday: 10 AM

AMEX - WFC 3 - 31st Fl.

FIX-IT TEAMS



Fall protection barriers have been installed throughout the site - along open sided edges and around floor holes. "Fix-it Teams" from Component Assembly Systems are on site to install and maintain barriers. If you're planning to work in an unprotected area, contact your supervisor so that Component can protect the area before you begin work.

Keep it Clear

Stair towers and the pedestrian walkway on the bridge provide access in and out of the pit. The top and bottom of each stair tower must be kept clear of debris and material storage. Also do not store materials near Port-a-San units - there's been at least one near miss collision with a material handler! If you're working in these areas, clean up and report cluttered conditions to a supervisor.

Training Classes

Orientation for New Hires

Thursdays at 10 am & 4 pm

OSHA 10-Hour Class

Fri, 3/8 & Sat. 3/9, 12 - 5 pm

AMEX, 31st Floor



Industrial Hygiene Air Sample Results

Summary for Week of 03/01/02 to 03/08/02

Attached is a summary of the laboratory results reported and direct reading measurements completed during the week of March 1, 2002 to March 8, 2002. The air samples were collected and the measurements were made by ATC Associates at the World Trade Center site.

The majority of the samples collected by ATC are "personal samples", meaning that the worker wore the sampling device. Most of results have shown exposure levels to be below 50% of the shift adjusted occupational exposure limits. The exceptions were:

- Elevated **quartz** concentrations as follows:
 - **15000% and 204%** of the shift adjusted OEL while using **Brokk hammer** in WTC 6.
 - **3433% and 1262%** of the shift adjusted OEL while using **jackhammers** in WTC 6.
 - **958% and 725%** of the shift adjusted OEL on a **Bobcat operator** in WTC 6.
 - **488% and 258%** of the shift adjusted OEL while **breaking concrete** in WTC 6.
 - **258%** of the shift adjusted OEL on a **spotter** in WTC 6.
 - **154% and 238%** of the shift adjusted OEL while **drilling** in WTC 6.
 - **117%** of the shift adjusted OEL while **driving** in WTC 6
 - **62%** of the shift adjusted OEL on a **spotter** at WTC 1 site.
- Elevated **diesel fume** concentrations as follows:
 - **98%** of the shift adjusted OEL while **working around heavy dump truck** in pit.
 - **85%** of the shift adjusted OEL on a **torch cutter** in the WTC 5 area.
 - **63%** of the shift adjusted OEL on a **torch truck washer**.
- Elevated **respirable dust** concentrations as follows:
 - **103% and 59%** of the shift adjusted OEL on a **jackhammer operators** in WTC 6.

8 hour equivalent time-weighted average **noise** levels above 90 dBA as follows:

- **99 dBA** for a **laborer and Brokk operator** in WTC 6.
- **87 dBA, 86 dBA** for **torch cutters** WTC 5.
- **91 dBA** for an **asbestos handler** in WTC 6.
- **102 dBA, 97 dBA** for a **Bobcat operator** in WTC 6.
- **96 dBA, 92 dBA, 89 dBA, 88 dBA** for a **driller** in WTC 6.
- **97 dBA, 94 dBA** for **Bobcat operator** in WTC 6, depression
- **98 dBA** for a **Water Truck operator**
- **92 dBA, 87 dBA** for a **Brokk operator**
- **89 dBA** for a **laborer** in WTC 6.



Industrial Hygiene Air Sample Results

Summary for Week of 03/01/02 to 03/08/02

Elevated exposures to **asbestos** are based on the results of analysis by phase contrast microscopy (PCM). This method counts all fibers detected that meet the criteria of "fiber". Materials that are not asbestos may be included in the reported analysis. These samples have been submitted for further analysis by transmission electron microscopy (TEM) to make a definitive determination of the fibers detected by PCM analysis.

Although no elevated **hydrogen sulfide** results were found during the week, Liberty Mutual has recommended continuous monitoring for hydrogen sulfide during work in excavations. In past weeks, we have had a few quantifiable hydrogen sulfide results (one area sample was actually above the OEL). Also, there have been many anecdotal reports of hydrogen sulfide smells. Because of the insidious nature and serious effects of exposures to excessive levels of hydrogen sulfide, we feel that it is important to continuously monitor occupied spaces which are subject to build-up of "sewer gases".

Some of the columns in the attached summary may require explanation:

Analyte Class - This column includes general category of the agents (substances) which were sampled.

of Samples - This indicates how many individual samples were collected for the agent class listed.

of Analysis - This is the number of individual analyses performed. If only one analysis is performed on each sample, then the number of analytes will equal the number of samples. However, most samples are analyzed for more than one agent as follows:

Metals: Aluminum, antimony, arsenic, barium, beryllium, cadmium, calcium, chromium, cobalt, copper, iron, lead, magnesium, manganese, nickel, selenium, silver, thallium, tin, titanium, vanadium, and zinc. Metal samples are sometimes also analyzed for total particulate.

Silica: Respirable dust, quartz, and cristobalite.

Acids: Hydrobromic acid, hydrochloric acid, hydrofluoric acid, nitric acid, phosphoric acid and sulfuric acid

Sulfides: Hydrogen sulfide and sulfur dioxide

OEL - Occupational Exposure Limit is the lower of the OSHA PEL or ACGIH TLV. PELs are established by an OSHA rule-making process and are the legal occupational exposure standards. TLVs are voluntary guidelines for occupational exposure which are established by the American Conference of Governmental Industrial Hygienists, a private professional organization.

Highest % OEL - This is the percentage of the occupational exposure limit (OEL) that the highest result represents. This is the value in the "Highest Result" column divided by OEL and converted to a percentage.

Shift Adjusted OEL - The OEL reduced to compensate for the reduced recovery time and longer exposure time posed by a 7 day per week, 12 hour shift work schedule.



Industrial Hygiene Air Sample Results

Summary for Week of 03/01/02 to 03/08/02

Highest % of Shift Adjusted OEL - This is the percentage of shift adjusted OEL that the highest result represents.

#of NQs - This is the number of analyses that reported that concentration as "not quantifiable" (NQ).

% of NQ - This is the percent of the total analyses which were reported as "not quantifiable".

If you have any questions concerning this information or would like further details about these results, feel free to contact the Liberty Mutual Industrial Hygienist on duty @ 917-566-2576.

Donald A. Weber, Sr., IHIT
Liberty Mutual Group

Liberty Mutual / ATC Measurement Results Summary 3/4/02- 3/8/02

Start Report Period	End Report Period	Analyte Class	# Samples Collected	#of Analysis	OEL	Highest % OEL	Shift Adj. OEL	Highest % of Shift Adj. OEL	Analyte	Job Description	#NQ's	% NQ's	# Less than Half Half OEL	% Less OEL
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Silica	35	70	0.05	7200.00%	0.024	15000.00%	Quartz	brock operator @ WTC 6 Lvl B5	58	80.00%	58	82.86%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Diesel Fume	8	8	0.02	98.00%	0.02	98.00%	Diesel Exhaust Particulates	Heavy Dump Truck In Depression Grace	1	12.50%	5	62.50%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Asbestos	9	9	0.1	16.00%	0.05	32.00%	Asbestos	Operator in Depression 4WTC	3	33.33%	9	100.00%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Metals	13	272	0.2	8.01%	0.134	11.96%	Copper	Torch Cutter in Depression 5WTC	180	66.18%	272	100.00%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Acids	5	30	5	0.58%	5	0.58%	Hydrochloric Acid	torch cutter on surface WTC #5 on scaffold	29	96.67%	30	100.00%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Ozone	6	6		0.00%		0.00%			6	100.00%	6	100.00%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Sulfides	13	13		0.00%		0.00%			13	100.00%	13	100.00%
3/4/2002 7:00:00 AM	3/8/2002 5:00:00 PM	Mercury	10	10		0.00%		0.00%			10	100.00%	10	100.00%
3/2/2002	3/9/2002	Noise	29	29	90 dBA	339%	90 dBA	339%	noise	bobcat in depression	0	0	12	41%
3/2/2002	3/9/2002	Carbon Monoxide	39	39	25 ppm	36%	17 ppm	54%	carbon monoxide	WTC 6 Floor 1 cut rebar	17	44%	38	97%

OSHA SAMPLING RESULTS SUMMARY AS OF 3/11/02

- Asbestos:** A total of 1136 samples (excluding bulk and blank samples) for asbestos have been taken. From 9/13 -9/21, 177 samples were taken in the financial district. Since 9/21, sampling focused on the debris field and those workers working in or immediately next to it. 144 of the samples analyzed exceeded OSHA's limit via PCM analysis. However, upon further analysis using discriminating counting methods and/or TEM analysis, the number of asbestos fibers found dropped dramatically to below detectable levels or well below .1 f/cc.
- Carbon Monoxide:** A total of 103 personal samples of workers on the rubble pile showed results ranging from 1 ppm to 34 ppm which are well below the OSHA permissible exposure limit of 50 PPM.
- Noise:** OSHA is monitoring the noise exposures of employees who perform (or work near) noisy operations such as jack hammering and drilling. To date the 131 samples collected indicate that employee noise exposures range from 73.7 dBA to 110.7 dBA. Twenty sample have exceeded the applicable permissible exposure limit of 90 dBA, mostly for concrete drilling, cutting, and jack-hammering operations. Accordingly, OSHA continues to recommend the use of appropriate hearing protection in noisy operations, and specifically, for concrete drilling, cutting, and jack-hammering operations OSHA recommends dual hearing protection i.e. plugs and ear muff protection.
- Total Dust (PNOR)** A total of 150 samples (excluding bulk and blank samples) for total dust in and around the debris field were taken. 5 samples were found to be in excess of the PEL for Total dust (15mg/m3). The highest exposure was found on one operator who was exposed at approximately 4X PEL.

around the perimeter are lower than those found directly over the pile. To date, only one sample taken on the rubble pile showed dioxin levels which exceeded background levels. Dioxins are considered collectively as suspect human carcinogens. OSHA does not have a PEL for dioxins.

Polynuclear Aromatic

Hydrocarbons OSHA has taken 110 samples (excluding blanks). The majority of the samples have not shown the presence of benzo(a)pyrene and/or one or more of five additional fused polycyclic hydrocarbons: anthracene, acridine, pyrene, chrysene and phenanthrene. Sample results to date have identified eight samples which reached or exceeded OSHA's coal tar pitch volatile PEL of 0.2mg/m³. These personal samples were taken on the pile on iron workers and grappler operators. OSHA continues to recommend the use of respiratory protection when working in the debris field.

Freon R-22,

Hydrogen Fluoride

& Phosgene: OSHA has taken a total of 208 samples for Freon R-22 (chlorodifluoromethane), hydrogen fluoride, and phosgene. Only one Freon sample resulted in a detectable level of 6.4 ppm during the transfer of Freon from the auxiliary chiller, and all other samples were none-detected. OSHA does not have an exposure limit for Freon R-22. (The NIOSH REL for Freon is 1000ppm.) Sampling for the decomposition products of Freon R-22, hydrofluoric acid (HF) and phosgene showed no detectable levels.

Inorganic Acids OSHA has taken approximately 151 samples for inorganic acids such as hydrochloric, phosphoric, and sulfuric acids. Three samples for sulfuric acid were found to exceed OSHA's permissible exposure limit (PEL) of 1 mg/m³. Workers were sorting debris.

Oxides of Nitrogen/

Sulfur: Sampling on grappler operators on the rubble pile, and on employees at the truck wash stations revealed trace levels of nitric oxide and nitrogen dioxide. SO₂ personal and area results were found to be below OSHA limits.



WTC INDUSTRIAL HYGIENE INFORMATION

Date: 03/07/2002

To: Bovis/AMEC - Ray Master
DDC- Bob Adams

CC: LMIG- John Rabovsky
LMIG- IH File

From: Mike Ramsey

RE: Supporting Data for H₂S Continuous Monitoring Recommendation

Enclosed is supporting data for our recommendation for continuous hydrogen sulfide measurements in trenches. This information was requested by attendees of past safety meetings.

The table below summarizes the results of the samples collected so far.

Hydrogen Sulfide Results Summary			
Type of Sample	Total Number Collected	Total Detectable	Total Above Limit
Time Weighted Average, Area	48	7	1
Time Weighted Average, Personal	31	3	0
Instantaneous, Direct Reading	--- *	5	2

* The direct reading results are not in electronic format, so the total number is not easily retrievable. Therefore, it is not being reported here.

The samples having detectable results were extracted from our database and are listed in the attached spreadsheet.

While the number of samples above the exposure limit is small, we are detecting quantifiable concentrations of hydrogen sulfide periodically. Because it is being detected and because of the anecdotal reports of hydrogen sulfide odors that have been heard from workers on the site, we believe that seepage of hydrogen sulfide into below grade excavations is a distinct possibility.

Because of this possibility of seepage and because of the particularly dangerous properties of hydrogen sulfide, we recommended continuous monitoring of hydrogen sulfide during below grade work.

We will distribute this data at next week's safety meetings along with our regular summary of industrial hygiene measurements.

ATC / Liberty Mutual
Quantifiable Hydrogen Sulfide Air Sample Results

Time-Weighted Average Sample Data

Sample Number	Sample ID	Zone	Job Description	Begin Time	End Time	Worker	Analyte	Results	OEL	Shift Adj. OEL	% OEL	% Shift Adj OEL
1 TWA	WTC-BO-CD—011208-09	BO	2' from Sewer Opening. By handrail to Grace Trailer	12/8/2001 9:37:00 PM	12/9/2001 9:38:00 AM	Time-Weighed Average Area Sample	Hydrogen Sulfide	16 ppm	10	10	160.00%	160.00%
2 TWA	WTC-BO-CJ-H-011231-02	BO	Labor on Gate Ent. SW Corner Sewer	12/31/2001 7:42:00 AM	12/31/2001 2:51:00 PM	Worn by Worker	Hydrogen Sulfide	0.14 ppm	10	10	1.39%	1.39%
3 TWA	WTC-ER-RF-H-020215-02	ER	flagger by entrance to vesey st.	2/15/2002 7:42:00 AM	2/15/2002 3:05:00 PM	Worn by Worker	Hydrogen Sulfide	0.12 ppm	10	10	1.21%	1.21%
4 TWA	WTC-BO-RM-H-020208-02	BO	West & Vesey next to Verizon Bldg	2/8/2002 7:42:00 PM	2/9/2002 3:00:00 AM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.11 ppm	10	10	1.11%	1.11%
5 TWA	WTC-BO-RF—011208-02	BO	45' North of sewer grate on chain link fence in Grace/Bovis Area	12/8/2001 9:23:00 AM	12/8/2001 9:30:00 PM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.094 ppm	10	10	0.94%	0.94%
6 TWA	WTC-BO-CJ-H-011231-03	BO	Adjacent to guard booth, SW corner sewer.	12/31/2001 7:43:00 AM	12/31/2001 2:53:00 PM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.088 ppm	10	10	0.88%	0.88%
7 TWA	WTC-AM-RF-H-020114-02	AM	nw Section of Ground Zero West St	1/14/2002 7:42:00 AM	1/14/2002 3:13:00 PM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.068 ppm	10	10	0.68%	0.68%
8 TWA	WTC-BO-CJ-H-020113-02	BO	sw Corner Area Sample Gate	1/13/2002 8:09:00 AM	1/13/2002 3:21:00 PM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.056 ppm	10	10	0.56%	0.56%
9 TWA	WTC-BO-MA—011208-08	BO	45' North of sewer grate on chain link fence in Grace/Bovis Area	12/8/2001 9:35:00 PM	12/9/2001 9:36:00 AM	Time-Weighed Average Area Sample	Hydrogen Sulfide	0.055 ppm	10	10	0.55%	0.55%
10 TWA	WTC-BO-CJ-H-020107-02	BO	Worker SW Corner Grace/Bovis	1/7/2002 8:25:00 AM	1/7/2002 3:55:00 PM	Worn by Worker	Hydrogen Sulfide	0.0040 ppm	10	10	0.04%	0.04%

Direct Reading Instrument Data

1 DR	Direct Reading		SW corner, near Grace Trailer	2/22/2002	2/22/2002	Instantaneous Area Sample	Hydrogen Sulfide	22 ppm	10	10	220%	220%
2 DR	Direct Reading		Front of Bankers Trust Southern Part Slurry Wall	2/27/2002	2/27/2002	Instantaneous Area Sample	Hydrogen Sulfide	15 ppm	10	10	150%	150%
3 DR	Direct Reading		SW corner, near Grace Trailer	2/22/2002	2/22/2002	Instantaneous Area Sample	Hydrogen Sulfide	8 ppm	10	10	80%	80%
4 DR	Direct Reading		West & Liberty	2/28/2002	2/28/2002	Instantaneous Area Sample	Hydrogen Sulfide	4 ppm	10	10	40%	40%
5 DR	Direct Reading		South Slurry Wall	2/22/2002	2/22/2002	Instantaneous Area Sample	Hydrogen Sulfide	2 ppm	10	10	20%	20%

Teamsters Local 237 CSEA

212-675-2597

12/22/01 08:52P F.002

CIVIL SERVICE BAR ASSOCIATION
 AFFILIATED WITH LOCAL 237
 INTERNATIONAL BROTHERHOOD OF TEAMSTERS,
 AFL-CIO

216 WEST 14th STREET, 7th FLOOR, NEW YORK, N.Y. 10011-7296
 212-675-0519
 212-675-0417 (fax)

Glorka Johnson
 President

October 3, 2001

VIA FAX (212) 380-8840

Ms. Sylvia Pryce
 Director, Citywide Office of Safety & Health (COSH)
 Department of Citywide Administrative Services (DCAS)
 Municipal Building, 1 Centre Street, 16th Floor South
 New York, NY 10007

Dear Ms. Pryce:

This letter is a follow-up to the Labor-Management meeting held this past Monday morning at 33 Beaver Street, wherein Bernard McSorley and I respectively represented Local 237 and its affiliate the Civil Service Bar Association, Dennis Sullivan and Lee Clarke, among others, represented District Counsel 37, Richard Yates represented the City's Office of Labor Relations, Vincent D'Orazio represented Corporation Counsel, and Elizabeth Theofan, Joseph Wagner, Lori Fierstein, Mitchell Paluszak and yourself represented DCAS and/or COSH.

At that time, Joseph Wagner, PE, represented that all occupied city owned or leased buildings in lower Manhattan have been inspected subsequent to the September 11th World Trade Center tragedy, and have been certified as structurally sound. Richard Yates and yourself stated that the air quality was tested and deemed safe within all these facilities. You distributed a two page "Status of Owned/Leased City Properties as of 10/01/01" spread sheet purporting to show, among other things, which buildings have been reopened, have been certified as structurally sound, have been cleaned, have had their interior surfaces tested for contaminants, and the airborne asbestos testing results.

Despite the above assurances, this union and its membership remain concerned about both the short and long-term health and safety consequences of being in this environment. For example, both the airborne and surface testing, upon information and belief, was conducted solely on one occasion per location. As the recovery operation continues at "Ground Zero", terrible odors are often smelled both inside and outside of many buildings downtown. Since winds and air currents shift, it may well be that "negative" or "safe" test results taken on a particular day and time could change. We respectfully demand frequent ongoing testing! Air and surface testing should be

P.2

212-688-3086

Scott C. Cantone

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Oct 9 2001 18:22

Fax: 718-595-3557

DEP

Transfers Local 237 CSBA

212-675-2367

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conducted *both inside and outside* the buildings our members are expected to report to, and should measure all potential surface and airborne contaminants and irritants, not merely asbestos.

Of particular interest to this union are the following locations:

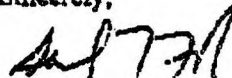
- 220 Church Street, aka 40 Worth Street;
- 250 Church Street;
- 150 William Street;
- 60 Hudson Street;
- 66 John Street;
- 32/42 Broadway;
- 100 Gold Street; and
- 250 Broadway.

Please immediately provide to my attention copies of all reports, surveys, safety assessments, etc. conducted subsequent to September 11th of this year, as well as a schedule and description of all anticipated ongoing testing. For your convenience, we are willing to send a representative to pick up these materials from your office.

Kindly also advise us of arrangements/ accommodations for temporary reassignment being made for employees with respiratory conditions or other serious issues related to the aftermath of the vile terrorist attack.

Thank you for your anticipated cooperation in these very unfortunate circumstances.

Sincerely,



Saul Fishman
Business Agent & Grievance Advocate

Cc: William J. Diamond, DCAS Commissioner
James Hanley, OLR Commissioner
Nicholas Mancuso, Secretary/ Treasurer Local 237
Dennis Sullivan, DC 37 Director of Research & Negotiations
Lee Clarke, DC 37 Director of Safety & Health
Gloria Johnson, Esq., CSBA President
Bernard McSorley, Local 237 Health & Safety Coordinator

P. 3

212-669-3086

Scott C. Cantone

Oct 05 01 06:03P

P. 03

Oct 9 2001 18:23

Fax: 212-595-3557

DEP

Fax: _____

Oct 19 2001 22:05 P.02

OSHA SAMPLING RESULTS SUMMARY AS OF 10/18

Asbestos: A total of 531 air monitoring samples for asbestos have been taken. From 9/13 -9/22, 177 samples were taken in the financial district. They were taken on OSHA personnel as they walked within certain predetermined zones. Results revealed asbestos concentrations ranging from ND to .037 f/cc., well below OSHA's permissible exposure limit (PEL) of .1 f/cc.

After 9/22, sampling focused on the rubble pile (the keystone area of the map) where 32 of 210 samples exceeded OSHA's limit via PCM analysis. However, upon further analysis using discriminating counting methods and/or TEM analysis, the number of asbestos fibers found dropped dramatically to below detectable levels or well below .1 f/cc.

Sampling at Pier 25 where trucks carrying the debris are being offloaded by crane to barge revealed no detectable asbestos.

Carbon Monoxide: Thirty-one personal samples for workers on the rubble pile showed results ranging from 1 ppm to 34 ppm well below the OSHA 50 ppm permissible exposure limit

Noise: As of 10/14, OSHA has been conducting noise monitoring in the rubble pile (the keystone area of the map). Five personal samples have been conducted on employees performing (or working near) various operations such as jack hammering. Employee's exposure to the noise range from 84 dBA to 89 dBA. OSHA's permissible noise exposure for construction is 90 dBA

Silica: As of October 18th, the overwhelming majority of the 168 silica samples show no detectable levels of airborne silica. The highest sample result was approximately twice the OSHA limit, whereas the next highest level was less than half of this limit. Both of these levels were found on personnel working in the rubble pile; an area where OSHA continues to encourage the use of respiratory protection.

VOCs: As of October 18th, OSHA has taken 155 samples for volatile organic compounds (VOCs) such as acetaldehyde, acrylonitrile, acrolein, benzene, 2-butanone, chlorodiphenyl (PCB), dioxin, ethyl benzene, formaldehyde, hexone, isocyanates, perchloroethylene, styrene, toluene, trichloroethylene, vinyl chloride and xylene. Screening samples initially showed elevated levels of some organic chemicals resulting from the fires burning in the rubble pile. Subsequent personal and area samples show worker exposure levels to be below OSHA limits. However, one personal sample result for benzene was found to be at the 8hr OSHA Allowable Limit concentration of 1ppm. This was found on a backhoe operator moving debris.

Metals: As of 10/16, OSHA has taken 235 air samples to monitor worker exposures to dusts, fumes, oxides, and other compounds of metals such as antimony, beryllium, chromium, cobalt, copper, iron, lead, manganese, molybdenum, nickel, vanadium, zinc, cadmium, magnesium, arsenic, and mercury. Results from these samples are generally well below the applicable OSHA limits. However, torch cutting and burning structural steel at the pile have resulted in instances of over exposures as follows: copper (6); iron oxide (6); lead (1); cadmium (3). Accordingly, OSHA is recommending that workers engaged in these operations wear appropriate respiratory protection.

Other Analysis: OSHA is sampling for dioxin, isocyanates and oxides of nitrogen. Results are pending